

## Family HESPERIDÆ, Leach.

## Subfamily PAMPHILINÆ.

Under this heading I would include all the genera having a short thick club of the *Pamphila* type to the antennæ, and terminating at a right angle in a short pointed hook, such as *Proteides*, *Carystus*, *Pamphila*.

## Genus PAMPHILA, Fabricius.

## 1. PAMPHILA MATHIAS.

*Hesperia mathias*, Fabricius, E. S. Suppl. p. 433. n. 289, 290 (1798).  
 "Gujerat, on flowers."

10. On some new Genera and Species of *Araneidea*.

By the Rev. O. P. CAMBRIDGE, C.M.Z.S.

(Plate XLIV.)

Among the Spiders described in the present paper are several of the greatest possible interest to the scientific arachnologist. We find one (*Stenochilus hobsonii*) presenting the almost unique character of possessing but *two* spinners\*; another (*Aphantochilus rogersii*), from Minas Geraes, Brazil, appears to be entirely without the *labium*, a portion of structure the absence of which is, I believe, unknown in any genus of *Araneidea* at present characterized. The resemblance of this Spider to some of the large-headed, horny, spine-bearing Ants of South America is very striking, and forms an unmistakable instance of similarity between individuals of two very widely separated groups of the *Articulata*. This similarity no doubt carries with it some advantage to one or the other—probably to the Spider, as being the most likely of the two to derive advantage from such a resemblance—which doubtless sums up a long succession and progress of small advantages. It is unfortunate that the term *mimicry* should have been given to this and other like curious resemblances, since that term seems to many naturalists to imply consciousness or volition on the part of the creature supposed to be the one which resembles another; and this certainly unfounded implication casts discredit upon the deep natural truth which the resemblance embodies.

Another of the Spiders (*Moneta spinigera*) described below, is interesting as affording a tolerably certain clue to the family affinities of a small group (*Scytodes* and *Omosita*) which has appeared to me widely separated hitherto from the Theridides, with which family the genus *Moneta* seems to connect it. I observe, however, that in a work on European Spiders just published, Dr. T. Thorell, of Upsala, places this group side by side with the family

\* Another instance of this peculiarity is found in the genus *Palpimanus* (Dufour).





*Theridioidæ*, in the suborder *Retitelariæ*, which substantially accords with my own present view of its systematic position. Several others of the genera now characterized it is exceedingly difficult to assign with certainty to any family groups hitherto established: a knowledge of their habits would, of course, be a great assistance in relegating them to their proper groups, though even this is not always to be relied upon as conclusive in determining the *family* of a Spider (see remarks on nov. gen. *Rhion*, postea, p. 742). In none of those now described, however, is any thing known, either of habits or habitat, beyond the mere locality in which they were captured; we have therefore nothing but *structure* to guide us; and the general form resulting from their structure is in several of the present species very far removed from the typical forms of the families to some recognized genera of which they seem in other respects to be related. It is unnecessary to enter into details in this short introductory notice, as remarks on the above point will be found appended to the descriptions of such as appear to be doubtful in their systematic allocations. It is, perhaps, only necessary to add here that, of the Spiders forming the ten new genera now proposed, *six* were received from Messrs. J. Nietner and G. H. K. Thwaites, of Ceylon, *one* from Bombay, from Major Julian Hobson (H.M. Staff Corps), one from Natal, and two from Sta. Fé, Minas Geraes (captured there by Mr. Henry Rogers, of Freshwater, Isle of Wight, and his son, now on a collecting expedition in Brazil).

#### Fam. DRASSIDES?

Nov. gen. STENOCHILUS (*στενός*, narrow, *χείλος*, lip, *labium*).

*Characters of the Genus*.—*Cephalothorax* elongate-oval, or, rather, somewhat attenuated diamond-shaped, strongly emarginate or indented on the lateral margins.

*Eyes* eight, very unequal in relative size, situated in two transverse rows at the fore extremity of the caput, curved away from each other, but forming a compact and almost circular group.

*Maxillæ* constricted at their base, enlarged in a circular form at the middle on their outer sides, and curved over and inclined towards the labium, over which their pointed extremities almost touch each other; they are also indented or impressed somewhat transversely near their middle.

*Labium* long, narrow, sharp-pointed at its apex, and a little wider near the middle than at the base.

*Legs* rather short, and differing but little in relative length, which appears to be 4, 1, 2, 3; each tarsus ends with two longish curved claws, minutely pectinate towards their base, and springing from a sort of heel or minute supernumerary joint.

*Abdomen* narrow, elongate-oval; *spinners* two only, short, rather strong, and biarticulate.

STENOCHILUS HOBSONII, n. sp. (Plate XLIV. fig. 1.)

Male adult, length  $2\frac{3}{4}$  lines, of cephalothorax  $1\frac{1}{3}$  line.



An immature male (owing to the greater length of the abdomen) measured  $3\frac{1}{2}$  lines in length.

The *cephalothorax* has the upper marginal profile line, of both the caput and thorax, level; the normal indentations are strong and form the emarginate appearance of the lateral edges; its colour is a bright orange-red; it is thickly impressed with minute punctures, and furnished thinly with fine greyish hairs.

The *eyes* are eight in number; the two outer ones of each row are contiguous to each other, and thus the eight form four pairs occupying the four corners of the ocular area; the two central eyes of the hinder row are the largest of the eight; they are of an oval shape, grey in colour, and separated from each other by the space of an eye's diameter; the two fore centrals are next in size, round in form, dark-coloured, and not more than half an eye's diameter apart from each other; the four lateral eyes are the smallest, nearly equal in size, and of a pearly white lustre; the height of the clypeus (*i. e.* the space between the lower margin of the fore central eyes and the insertion of the falces) is rather more than the diameter of one of those eyes.

*Legs*: those of the first and second pairs are much the strongest (especially the coxal and femoral joints); their colour is orange-yellow, and they are furnished only with fine hairs.

*Palpi* short, similar in colour and armature to the legs; humeral joints much bent; cubital and radial joints short, about equal in length and strength; the latter (radials) are very slightly produced in a pointed form at their outer extremities; the digital joint is rather large, suffused with a brownish hue, and of an oval form. The palpal organs are neither very prominent nor complex; they consist of simple corneous lobes or processes, with a rather strongish prominent point near their centre.

*Falces* moderately long, not very strong; they are of a conical form, vertical in position, and furnished at their extremities with a weakish curved fang; their colour, together with that of the *maxillæ* and *labium*, is similar to the colour of the cephalothorax.

*Sternum* oval, with indented margins, and with a small, narrow, somewhat oblong production at its hinder extremity; in colour it is similar to the *maxillæ* and *labium*.

*Abdomen* long, narrow-oval in form, and moderately convex above; it is of a warm pinkish-red colour, and rather thickly clothed with short hairs of a dull brownish yellow; an apparent pedicle, which, however, is only the prolongation of the hinder extremity of the cephalothorax, connects it with that part; the spiracular plates are yellow, and the spinners two only.

An adult and an immature male of this species were contained in a collection of Spiders most kindly made for me in Bombay, in 1863, by Captain (now Major) Julian Hobson (of H.M. Staff Corps), after whom I have great pleasure in naming it. It is a remarkable Spider, not only from the form of the cephalothorax, *maxillæ*, *labium*, and position of the eyes, but especially from the possession of but *two* spinners, in which, as also in the form of the *maxillæ* and the

greater relative strength of the coxal and femoral joints of the fore legs, it shows an evident affinity to Spiders of the genus *Palpimanus* (Duf.), although differing from them remarkably in the contour of the cephalothorax and some other characters. I have placed the genus *Stenochilus* provisionally, though doubtfully, in the family *Drassides*.

### Fam. AGELENIDES.

#### Subfam. LACHESINA\* (Cambr.)

#### Nov. gen. CYDIPPE (nom. propr.).

*Characters of the Genus.*—*Cephalothorax* oval, broader behind than before; caput full and bluff before, sloping forwards and rounding off to the clypeus, which is of considerable height.

*Eyes* eight, small, and not differing much in size, situate on the fore slope of caput in *three* transverse lines (2, 2, 4). Those constituting the first two rows form nearly a square, whose foremost side is rather wider than its hinder one; the third row consists of *four* eyes in a very slightly curved line (the curve directed forwards) greatly exceeding the other two lines in length; the figure thus formed by the eyes is somewhat of a T shape.

*Legs* strong and moderately long, their relative length being 4, 3, 1, 2; between 1 and 2 there is but little difference in length; each tarsus ends with *three* curved claws, of which the upper ones are the largest, and have some strong pectinations underneath towards their base.

*Maxillæ* short, strong, greatly enlarged at their base, curved, and inclined towards the *labium*, which is broader at its apex than at the base, its upper half being nearly semicircular.

*Sternum* short, broad, and somewhat heart-shaped.

#### CYDIPPE UNGUICULATA, nov. sp. (Plate XLIV. fig. 2.)

Male adult, length  $4\frac{1}{2}$  lines, length of cephalothorax  $2\frac{1}{2}$  lines.

The *cephalothorax* is much narrower before than behind, but has no sudden lateral compression at the caput; its colour is a dark shining chestnut-brown; and it is clothed with a very few fine hairs and bristles, chiefly on the caput; the normal furrows and indentations are distinct though slight, that at the junction of the caput with the thoracic segments being the deepest; the profile line shows a wider depression about the middle; otherwise the surface of the cephalothorax is smooth, even, and generally rounded off.

The *eyes* form three transverse rows about equidistant from each other; the two foremost of these rows are short, and consist each of two eyes; the hinder one is long and consists of *four* eyes; those of the foremost row are the largest, and the two centrals of the hinder row the smallest of the eight; the eyes of the first two rows, together with the two hind central eyes, form two nearly straight

\* Subfam. *Lachesina* comprises the genera *Lachesis* (Savign.), *Storena* (Walck.), and *Cydippe* (Cambr.).

equally divided longitudinal lines, which converge as they run backwards. The height of the clypeus exceeds by a little the length of these lines; the lateral eyes of the hinder row are widely separated from the central pair, and are situated a little further backwards, forming a longer line than the longitudinal ones above mentioned.

The *legs* are of a dark yellowish-brown colour, tinged with olive-green, the femora and the undersides of the tibiæ being the darkest; they are furnished with hairs and spines varying in length and strength, mostly on those of the two hinder pairs; the tarsi terminate with three claws.

The *maxillæ*, *labium*, and *sternum* (whose form and structure are given in the generic characters) are of a yellow-brown colour, the maxillæ being tinged with olive.

The *palpi* are short and strong; the humeral joints are much enlarged, or tumid beneath and on the outer sides of their hinder part; the cubital and radial joints are equal in strength, the former being rather the longest; these two fit closely to each other, and the latter has a bifid prolongation at its outer extremity; the upper limb of this prolongation is much the longest, and its point is corneous, bluntish, and bent downwards; the *digital* joint is strong and rather long, exceeding in length the radial and cubital joints together; it has a slight lobe at its hinder extremity on the outer side, close beneath the projection on the radial joint; it is thinly furnished with fine hairs, and has at and near its extremity several strong curved claws or talons of different sizes; in colour the palpi resemble the legs, the digital joints being of a deep chestnut-brown approaching to black. The palpal organs are well developed, but not complex, consisting of a long, oval, corneous lobe, divided longitudinally by a deep cleft near its outer margin.

The *falces* are long, strong, and conical, a little inclined backwards to the labium, furnished with short hairs, and similar in colour to the sternum.

*Abdomen* oval, very convex above, and greatly projecting over the base of the cephalothorax; it is clothed sparingly with hairs; its sides and underside are nearly black; almost the whole of the upper side is occupied by a broad pale orange-yellow band, somewhat indented or irregular on its outer margins, enlarging about the middle and narrowing towards the spinners; the yellow band is charged with a longitudinal somewhat oval patch of blackish colour on its fore part, and this is followed by several transverse curved dusky bars between the blackish patch and the *spinners*; these latter (six in number) are short and not very strong, those of the superior pair being the strongest.

An adult male received from Natal, Africa.

This genus, founded on the very distinct and fine Spider above described, is closely allied to *Lachesis* (Savigny) and *Storena* (Walck.), but may be easily distinguished by the position of the eyes, which differs remarkably from that of those genera. As a species it is strongly characterized (in the male sex at least) by the



peculiar and almost unique powerful claws or talons at the extremity of the digital joints of the palpi.

Fam. THERIDIDES.

Nov. gen. SPHECOZONE (σφήξ, a wasp, ζώνη, waist).

*Characters of the Genus.*—*Cephalothorax* separated from the abdomen, to which it is joined by a distinct stem or pedicle; caput rather elevate; clypeus impressed below the eyes.

*Legs* long and slender; relative length 4, 1, 2, 3,—4 and 1 being nearly equal; each tarsus ends with three claws, the palpus in the female being without any terminal claw.

*Eyes* not very unequal in size, situated in two transverse curved rows (or four pairs) on upper fore margin of caput; those of each lateral pair are contiguous to each other and seated on a slight tubercle; those of the two central pairs form an oblong figure, whose fore side is much the shortest.

*Maxillæ* moderately long, nearly straight, but considerably inclined towards the labium, dilated at their bases, and somewhat pointed at extremities on inner side.

*Labium* short, small, and apparently nearly semicircular in form.

SPHECOZONE RUBESCENS, n. sp. (Plate XLIV. fig. 3.)

Male adult, length  $1\frac{1}{2}$  line; female adult, 2 lines.

The *cephalothorax*, *falces*, *maxillæ*, *labium*, *sternum*, and part of the femora of the legs are of a bright red-brown, tinged with orange; the rest of the legs, the palpi, and (in the female) the caput, falces, maxillæ, and labium are strongly suffused with black. The abdomen is of a bright pinkish or cinnamon-red, the colour of the petiole by which it is joined to the cephalothorax being similar to that of this latter part; the abdomen is oblong-oval in the male, but shorter and more convex in the female; it is glossy, sparingly clothed with fine hairs, and has 4-5 slender, pale angular lines or chevrons in a longitudinal series, spanning the hinder half of the upperside; these lines are probably very indistinct, even if visible at all, when alive, but are sufficiently well-marked when in spirit of wine; the hinder extremity of the abdomen is tipped with black; and the spinners are of a dusky yellow-brown colour, suffused with blackish; the form of the *cephalothorax* is oval, the caput being raised above the level of the thorax; the clypeus is high, its height considerably exceeding the length of the space occupied by the four central eyes, and nearly (if not quite) equal to the length of the line formed by the first row.

The *legs* are sparingly furnished with hairs and a few slender nearly erect bristles.

The *palpi* are moderate in length, the humeral and cubital joints being slender, the latter short; the radial joints are large and of very peculiar form, difficult to describe and best conceived from the figures; they are of an irregular cup- or calyx-shape, with the digital



joint springing from the centre of its hollow; this latter (digital) joint is large and of oval form, with an elongation behind, by which it seems to adhere to the radial joint. The palpal organs are well developed, but not very complex; they consist of two largish lobes, with one or two corneous processes or spines at their extremity.

The *falces* are moderately long and strong, a little divergent at their extremities, enlarged or prominent in front on the outer sides; they terminate with a not very strong curved fang, and are armed with several sharp teeth near their extremities on the inner side.

*Sternum* broad, convex, heart-shaped, and glossy, furnished with a few longish erect bristly black hairs.

The adult female is larger than the male, but resembles it in colour, excepting the dark caput, falces, and maxillæ; the epigyne is also of a deep reddish brown, nearly black.

Two adult females and an adult male of this Spider were lately received from near Sta. Fé, Minas Geraes, Brazil, where they were captured by Mr. Henry Rogers. Had it not been for the excessive slenderness of the legs, and the distinct joint or petiole by which the cephalothorax and abdomen are connected, this species could hardly have been excluded from the genus *Erigone* (Sav.), to which in other respects it bears the closest resemblance.

It must be exceedingly Ant-like when alive; and in general form it bears considerable resemblance to certain of the genus *Micaria* (fam. *Drassides*); but the difference in the form of the caput and other characters separate it easily from that genus.

It is evidently allied to "*Formicina*" (Canestrini), but differs in the *petiole* and relative lengths of the legs, as well as in other particulars.

As far as my own experience goes, this Spider is more nearly allied to the almost exclusively northern genus *Erigone* than any other known tropical Spider; and possibly it may prove to be the type of a more or less numerous closely allied exotic group. Its bright colours contrasted with the black caput and tip of the abdomen, together with its slender legs and waist, make it a very striking and pretty species.

Nov. gen. CEPHALOBARES (κεφαλή, head, βαρὺς, heavy).

*Characters of the Genus.*—*Cephalothorax* short, nearly round at its lower margins; *caput* large, abnormally elevated and convex, rounded on all sides, and projecting greatly over the falces.

*Eyes* not very unequal in size, forming four pairs on the fore part of the caput; the four centrals form a large square, whose fore side is the shortest; and on either side of the lower part of the square are the two lateral pairs, the eyes of each of which are contiguous to each other, and seated on a very slight tubercle.

*Legs* short, moderately strong, not greatly unequal in length; relatively 1, 4, 2, 3; the tarsal claws three in number and very minute.

*Falces* small, moderately long, straight.

*Maxillæ* moderate in length and strength, slightly inclined to the

labium, rounded off on their *outer* and pointed on their *inner* extremities.

*Labium* very short, broad, and somewhat semicircular in form.

*Sternum* of a somewhat triangulated heart-shape.

*Abdomen* oval, cylindrical; its upper extremities projecting over the spinners.

CEPHALOBARES GLOBICEPS, n. sp. (Plate XLIV. fig. 4.)

Male adult, length  $1\frac{1}{4}$  line.

The *cephalothorax*, *falces*, *maxillæ*, and *labium* are of a brown colour tinged with yellowish; the former is clothed with a few pale hairs; and the normal grooves and indentations are almost obsolete, the *caput* being apparently the elevation of almost the whole cephalothorax; in fact this part seems to have run entirely to caput, which is broad, rounded, and so considerably elevated and prominent that the clypeus is overhung and partly *underneath* the fore part of the caput; the cephalothorax thus reminds one of some of the species of *Erigone* (*Walckenaera*), especially *W. humilis* (Bl.) and *W. affinitata* (Cambr.).

The *eyes* occupy a large area, being spread out over the fore part of the caput in the form stated in the "generic characters" above; those of the fore central pair are dark-coloured and slightly the largest of the eight; those of the lateral pairs are the smallest, and with those of the hind central pair are pearly white.

*Legs* pale yellow, broadly banded with bright orange-red, and furnished sparingly with short hairs.

*Palpi* short, of a yellow-brown colour, except the digital joints, which are dark brown; the cubital is shorter than the radial joint, which is large, expanding forwards, and somewhat produced at its upper extremity over the base of the *digital* joint, which last is of a short oval form; the palpal organs are well developed, but not very complex, being very similar in general form and structure to those of many typical species of "*Theridion*."

The *abdomen* is of an oblong or somewhat oval-cylindrical form, and does not project over the base of the cephalothorax; it is sparingly clothed with hairs, and is of a pale yellowish-white colour; the upperside has an indistinct pattern, and the sides are also marked with longitudinal striations of a deep brown colour; the hinder part of the abdomen is bluff and abrupt, and projects over the spinners; this bluff portion has four rather conspicuous dark shining tubercular patches forming nearly a square, whose area is tinged with pinkish red; the underside and around the spinners are also strongly tinged with the same colour.

An adult male of this Spider was contained in a fine collection of Araneidea kindly made for me in Ceylon by Mr. G. H. K. Thwaites, during the past year. Although generically closely allied to *Theridion*, it was impossible to include it satisfactorily in that genus; the shortness of the legs, the extraordinary form of the caput, as well as differences in the structure of the more ordinary generic parts, made it necessary to construct a new genus for its reception.

## Fam. THERIDIDES.

## Subfam. SCYTODINA\* (Cambr.).

## Nov. gen. MONETA (nom. propr.).

*Characters of the Genus.*—*Cephalothorax* rather elevated or gibbous at the thoracic part, lower and flattened before; of a short oval form, narrowest in front, with but a very slight lateral compression at caput.

*Abdomen* somewhat of a quadrangular form, broader behind than before, with a median cylindrical prolongation from its hinder extremity, terminating with the spinners.

*Eyes* eight, rather unequal in size, in two nearly straight parallel rows, spanning the greater part of the width of the caput, and having a prominent but flattened clypeus; the exterior eyes on either side are seated on a strongish tubercular elevation.

*Maxillæ* rather long, strong, enlarged at the base, curved and inclined over the labium, and rounded(?) at the extremities.

*Labium* short and somewhat semicircular in form.

*Sternum* rather long, and much resembling the form of a kite with its sharp end truncated.

*Legs* long, slender, furnished sparingly with hairs and slender bristles; the tarsi (which are very short) terminate with three claws; relative length of the legs 1, 4, 2, 3.

MONETA SPINIGERA, n. sp. (Plate XLIV. fig. 5.)

Female adult, length  $1\frac{1}{2}$  line.

The thoracic portion of the cephalothorax is slightly humped or gibbous, and the caput depressed; its colour is a clear yellow-brown, with the margins, a series of irregular patches just above them, and a median longitudinal line of brown-black; the clypeus is prominent.

The *eyes* are placed in two transverse parallel rows of equal length, or in four pairs; those of the two central pairs form very nearly a square; those of the fore central pair are very small and the smallest of the eight, and are a little further apart than those of the hind central pair, but nearer to each other than each is to the lateral one on its side; those of the lateral pairs are seated respectively on the outer side of a strong and somewhat geminated tubercle, and, as well as those of the hind central pair, have bright pink-red margins; the lateral eyes appeared to be the largest of the eight.

*Legs* longish and slender, those of the third pair very much the shortest, all with unusually short tarsi; they are of a yellowish colour, tinged with brown, marked and faintly banded with darker brown; the legs generally are very thinly furnished with hairs, perhaps rubbed off; but the tarsi, especially those of the hind pairs, have a distinct row of bristles bearing somewhat of a "*calamistrum*" appearance.

\* Subfam. *Scytodina* includes the genera *Scytodes* (Latr.), *Omosita* (Walck.), and *Moneta* (Cambr.).



*Palpi* moderate in length, similar in colour to the legs, and terminating with a rather conspicuous, curved, but simple black claw.

*Falces* neither very long nor strong; they present no peculiar features, and, together with the maxillæ, labium, and sternum, are rather lighter-coloured than the cephalothorax, the *falces* being also marked near their base on the inner sides with black.

The *abdomen* is of a very peculiar form, somewhat quadrate, or rather subtriangular, the hinder part being much wider than the fore part (which forms the *apex* of the triangle and is truncate); the hinder part has a sort of cylindrical median prolongation; the abdomen is of a dull brown above, marked with darker, and with whitish cretaceous spots disposed chiefly in two irregular longitudinal lines; the sides and hinder part are black, and the underside is of a pale dull brown; the cylindrical prolongation is also of a pale dull brown, with a fine median longitudinal black line, giving off several oblique lateral whitish lines; the spinners terminate this prolongation, and appear to have nothing remarkable in either their size or structure; in the transverse line of the widest part of the abdomen, and in the median longitudinal line of the upperside, is a single, curious, prominent, sharp, but short, beak-like spine directed backwards.

An adult female of this Spider was received in 1869 from Mr. Nietner, from Ceylon, and another in the same year (also from Ceylon) from Mr. Thwaites; it is an interesting species, and appears to furnish a link between the *Scytodides* and *Theridides*. The genus *Moneta* might thus either come at the head of the *Theridides* proper, followed by the genus *Pholcus*, or terminate the subfamily *Scytodina*; the former, however, seems to be its more proper place. Dr. Thorell includes the genus *Pholcus* with *Scytodes* in a subfamily of *Theridides*; but *Pholcus* appears to me to be too decidedly belonging to the family *Theridides*, as formerly constituted, to be placed in the same restricted group as *Scytodes*.

#### Fam. EPEÏRIDES.

Nov. gen. CHORIZOOPES ( $\chi\omega\rho\iota\zeta\omega$ , to divide;  $\omega\psi$ ,  $\omega\pi\epsilon\varsigma$ , the eyes).

*Characters of the Genus.*—*Cephalothorax* short, nearly square, with the corners rounded off; the caput occupies almost the whole of the cephalothoracic area, and is very broad and much elevated, the occiput being the highest and most prominent part.

The *abdomen* is short, broad, and nearly as high as long; it is bluff and a little larger behind (where it has some small subconical eminences) than before.

*Eyes* eight; four in a small quadrangular figure in front of the caput, and a pair on each side, far removed from the central four, and close upon the lateral margin of the caput.

*Legs* short, moderately strong; relative length 4, 1, 2, 3, but very little difference between them; tarsal claws three in number, small, and toothed at their base; opposed to them are some supernumerary pectinated ones.



*Maxillæ* rather strong, greatly bent (in an almost angular form) over the labium.

*Labium* of a somewhat triangular form, broader in the middle than at its base, and pointed at the apex.

CHORIZOOPES FRONTALIS, n. sp. (Plate XLIV. fig. 6.)

Female adult, length  $1\frac{1}{2}$  line.

The general form and structure of this Spider have been sufficiently described above. The *caput* has the occipital portion prominent on either side, and a depression where it joins the thoracic part; the normal furrows and indentations are obliterated owing to the abnormal development of the caput, which usurps almost the whole cephalothorax.

The *cephalothorax* is sparingly clothed with pale grisly hairs of a more or less dark yellow-brown colour; the region of the occipital prominences being palest.

The *eyes* do not differ greatly in size: the upper ones of the central quadrangular group are the largest, and those of the lateral pairs the smallest of the eight; the eyes of each of these latter pairs are nearly contiguous, and of a pearly white colour; the others are darker.

The *legs* are of a pale yellow, banded with yellow-brown, and are furnished sparingly with short hairs.

*Palpi* small, short, furnished with short hairs and a very fine, black terminal claw.

*Falces* large and strong, rather prominent in front and on the sides, and curved when looked at from before; towards the inner extremity of each is a prominence with a curved margin armed with a sort of comb of close-set longish teeth; the colour of the *maxillæ* is a pale yellowish brown; that of the *labium* and *sternum* being darker.

The *abdomen* is sparingly clothed with very short hairs; it is of a short-oval form and very convex above, bluff and abrupt behind, where it has four, small, bluntish or subconical eminences, arranged in a transverse diamond shape, spanning the whole width of the abdomen; it does not project over the base of the cephalothorax; and its colour is a dull yellowish with a brown tinge, marked with deep black-brown and white, forming a regular pattern, difficult to describe and best seen in the figure; two small white spots (followed by several more minute ones) are rather conspicuous on the upperside; between the spinners and each of the lateral eminences, and not far from the former, is a large, conspicuous, round, black blotch. The epigyne and the orifices of the spiracles are of a deep red-brown colour; the spinners are short, six in number, and not very strong nor conspicuous.

Adult females of this Spider were contained in collections of Spiders from Ceylon, in 1869, both from Mr. Nietner and Mr. Thwaites. I have included it in the family *Epeirides*, with Spiders of which it is evidently connected, though in the form of the *maxillæ* and *labium* it bears strong affinity to the *Theridides*; in whatever family, however, it may finally be placed, there seems to be no

present genus to which it can be referred. Nothing is known of its habits; the wide separation of the three groups of eyes, with the very peculiar form of the cephalothorax and the structure of the maxillæ, make it a remarkable species, and one which, when looked at from in front, might easily be mistaken for a four-eyed Spider.

Nov. gen. *ÆTA* (nom. propr.).

*Characters of the Genus.*—*Cephalothorax* rather depressed above, and rounded on the outer margin; *caput* broad, flattened, and produced in front into three prominent productions, all in the same plane; the central prominence bears the four central eyes at its extremity in the form of a quadrangle, and each of the lateral prominences a lateral pair of eyes.

*Abdomen* oval, pointed behind, not very convex above, armed on the upperside with tuberculiform spines, mostly surmounted with long and strongish bristles.

*Legs* rather long, slender, armed tolerably thickly with hairs and long spine-like bristles; tarsal claws three in number, toothed, and with some supernumerary opposed pectinated ones beneath; relative length of legs 4, 1, 2, 3.

*Maxillæ* strong, moderately long, inclined towards the labium, and obliquely truncate, rather on the outer sides, at their extremities; inner extremities pointed.

*Labium* short, broad, and apex curved.

*ÆTA SPINOSA*, n. sp. (Plate XLIV. fig. 7.)

Male adult, length  $1\frac{1}{2}$  line.

The *cephalothorax* has the thoracic region of a yellow colour; the normal grooves and indentations are fairly marked; the *caput* is of a deep brown, softening into a pale yellow-brown on the lower margins, and furnished with long bristly hairs; the two lateral projections at its fore extremity are rather pointed, of considerable length, divergent from and rather longer than the central prominence, which is, however, the strongest of the three, obtuse, and slightly impressed at its extremity.

*Eyes* eight, not very unequal in size; two contiguous to each other are placed at the extremity, on the outer side of and beneath each lateral prominence of the *caput*; a pair almost (but not quite) contiguous at the base on the upperside of the central prominence, and another pair at its extremity, much wider apart than those of the pair at its base, and, in fact, occupying its fore corners; these four form an oblong rectangular figure whose fore side is much the widest. Except those at the base of the central prominence, which are pearly white, the eyes are of a somewhat amber-colour of different shades.

The colour of the *legs* is pale yellow.

*Palpi* short, of a yellowish colour; the cubital, radial, and digital joints are dark brown; the *cubital* is short, pointedly prominent above, and has a long and somewhat sinuous dark spiny bristle

issuing from its most prominent part; the *radial* is large, very prominent and obtuse above, somewhat blunt-conical in form, and armed with hairs, long spines, and strong spiny bristles; the *digital* joint is small, oblong-oval; the palpal organs are well developed and complex (though compact), with small corneous processes and spines; these organs are directed outwards and are jammed up against the radial joint, seeming as though issuing from or articulated to it.

The *falces* are set back rather far beneath the fore part of the caput, the clypeus being low and retreating, owing to the prominence of the upper fore part of the caput; they are inclined backwards towards the maxillæ, moderate in length and strength, very slightly divergent and armed near their inner extremities with a row of curved spiny bristles, apparently in place of the teeth usually occupying that situation; the colour of the falces is yellow, tinged with brown, and that of the *maxillæ*, *labium*, and *sternum* is yellow; the form of the sternum is heart-shaped, rather pointedly produced behind.

The *abdomen* is of an oval form, pointed behind; it is of a dull yellow colour, mottled (chiefly on the sides) with cretaceous white; the fore part of the upperside has a broad marginal dark-brown band of a somewhat horseshoe form with bold nail-like points of yellow distributed along it; between the extremities of this band and about the centre of the upperside of the abdomen is a large roundish-oval blotch of the same colour, also charged with some similar yellow nail-like dots; another blackish patch follows each extremity of the horseshoe band, and behind each of these again is another dark dot; from all of these dark markings spring some strong, erect, bluntish spines, varying a little in length and strength, and surmounted with long tapering bristles directed backwards; the spines which issue from the patches immediately succeeding the horseshoe band are the strongest, blackest, and most conspicuous; these are obtuse at their extremities and devoid of a terminal bristle, perhaps accidentally broken off(?).

An adult male of this puzzling Spider was contained in a collection of Spiders received from Mr. Nietner, from Ceylon, in 1869. I am inclined to think that it should be included in the family *Epeirides*, although the slenderness and armature of the legs, as well as the form of the maxillæ, connect it closely with the *Theridides*; the form of the cephalothorax and the tarsal claws, however, seem to connect it more nearly with the former; in which family I have now provisionally included it. Nothing is known of its habits.

Family — ?

Nov. gen. RHION (nom. propr.).

*Characters of the Genus.*—*Cephalothorax* short, rather flattened above, rounded on hinder margin, and a little compressed laterally at the caput, which is broadish and truncated before.

*Eyes* six in number, rather large and not greatly unequal in size;



four form nearly a straight row across the upperside of the fore part of the caput; and in front of each lateral eye of this row is another nearly contiguous to it, and about an eye's diameter from the lower margin of the clypeus.

*Legs* neither very long nor strong; relative length 1, 2, 4, 3, between 2, 3, and 4 there is but very little difference; the metatarsi of the hinder pair are furnished on the outer sides with "calamistra," and the tarsi end with three curved strongly pectinated claws, of which the lower one only appeared to differ from the upper ones in size.

*Maxillæ* strong and rather long, curved and inclined towards the labium, of nearly equal breadth throughout, and rounded at their extremities.

*Labium* moderately long, broader near its base than at the apex, which is truncated. A supernumerary mamillary organ, or pair of short united spinners, is situated beneath, or in front of, the usual ones, which are rather strong, prominent, and are projected in the same plane as the abdomen.

#### RHION PALLIDUM, n. sp. (Plate XLIV. fig. 8.)

Male adult, length  $\frac{3}{4}$  of a line.

The general colour of this interesting little Spider is a pale amber-yellow, marked and mottled with cretaceous white; the colour of the cephalothorax is rather deeper and brighter than that of the abdomen, the upperside of which last is almost entirely suffused with white, longitudinally and transversely intersected with yellowish lines; the sides of the cephalothorax are slightly radiated with dusky, the white being principally in the median line.

The four *eyes* of the hinder row are nearly of the same size, the two centrals being nearer to each other than each is to the lateral on its side; the two eyes forming the front row are the largest of the six and widely separated from each other; each is almost, but not quite, contiguous to the hind lateral on its side, with which it is seated apparently on a small common tubercle.

The *legs* are furnished with hairs only; the "calamistra" on the metatarsi of the hinder pair are formed by fine hairs not very thickly set, nor very conspicuous.

The *palpi* are short; the radial is shorter than the cubital, and not quite so strong; it has near its upper extremity, rather on the outer side, a small but short, conspicuous, bluntish-pointed, prominent black spine; the digital joint is longer than the radial and cubital together, it is oval in form and produced at its extremity like the digital joints in the palpi of some species of *Tegenaria*; the *palpal organs* are well developed but simple in structure, consisting apparently of a corneous lobe with a roundish surface, and furnished with a slender black filiform spine, which issues from near their inner extremity, and, curving round on the inner side of the digital joint, terminates in a fine point near their base on the outer side.

*Falces* moderate in length and strength, and of the ordinary form.

*Sternum* heart-shaped.



*Abdomen* short, oval, rather suddenly narrowing near the hinder extremity; it is moderately convex above, and projects slightly over the base of the cephalothorax; some short black bristles are thinly dispersed on its sides, and a few flattened erect ones on its upper-side; of these several in a compact bunch or small group occupy the median line of the fore part; the outer side of each of the superior pair of spinners is black.

A single adult male of this minute Spider was contained in the collection before alluded to, received from Mr. Thwaites of Ceylon. I can hardly venture to pronounce upon its family affinities. It appears to be related to *Tegenaria*, as well as to *Uloborus*, *Mithras*, and *Miagrammopes*; its habits are unknown; but the number and disposition of its eyes and its general characters are interesting, and seem to remove it still further from the family *Epeirides* than the last three genera above mentioned. These genera, indeed, appear to be attached to that family chiefly, if not entirely, by their common habit of spinning a more or less orbicular snare; this is a character which will, I think, eventually prove of too slender importance, taken by itself, to weigh against strong structural differences. In a most able and important work (before alluded to), 'On the Genera of European Spiders,' by Professor Thorell of Upsala, this author constitutes *Uloborus* and *Mithras* a subfamily (*Uloborinæ*) of the family *Epeirides*. The distinguishing characters given of the subfamily are strong; and that which unites it to the principal family, being only the form of the snare, seems to me likely to prove untenable. The comparative unimportance of this character is shown by its entire absence in an undoubted Epeirid lately received from New Zealand, from Dr. Llewellyn Powell, M.D., who kindly favoured me with a sight of some interesting drawings of its snare: this, so far from being in any way geometric or orbicular, greatly resembled that of *Dictyna benigna* (Bl.), but was simpler and more artless. Dr. Powell's Spider is of the genus *Arachnura* (Vins.), a genus of which the typical species is said to weave a geometric snare.

#### Family THOMISIDES?

##### Nov. gen. PHYCUS (nom. propr.).

*Characters of the Genus.*—*Cephalothorax* small, broad-oval; caput large and elevated.

*Eyes* eight, large, seated in two transverse curved rows and occupying the whole width of the upper fore part of the caput, forming somewhat of a crescent whose horns point backwards.

*Abdomen* large, short, oval or, rather, heart-shaped, being broad in front and going off on either side in a gradual convex line to a point at the spinners; it is rather convex above, and projects greatly over the base of the cephalothorax, so that the fore margin of the abdomen almost touches the hinder row of eyes, where both it and the cephalothorax are in close contact with each other.

*Legs* short, strong, tapering, armed with hairs and long slender spines and bristles. Each tarsus ends with three claws.

*Maxillæ* moderately long, strong, rounded at their extremities, a little curved, and greatly inclined over the *labium*, which is small, short, and subtriangular or somewhat semicircular, with the apex slightly pointed.

PHYCUS BREVIS, n. sp. (Plate XLIV. fig. 9.)

Female, immature, length 1 line.

The general aspect of this Spider is remarkable, owing to its short hunched appearance, the *caput* being large and elevated, while the cephalothorax, as a whole, is small, sloping rapidly and continuously in a slightly hollow line from the summit of the *caput* to its hinder margin; its colour is deep brown, and the *caput* is furnished with long curved spiny bristles.

The *eyes* are rather large, nearly equal in size, and form a large crescent; the clypeus is high, slightly prominent below, and exceeds in height the greatest breadth of the crescent formed by the eyes; they are seated on black tubercles, those of the lateral pairs are contiguous to each other; those of the two intermediate pairs form very nearly a square, the fore side being slightly the shortest. The eyes of the hind central pair are rather further from each other than each is from the lateral on its side; those of the front row are equidistant from each other, and apparently larger than those of the hinder row.

The *legs* are short, strong, tapering, and laterigrade; the difference in their relative length is very little; those of the fourth pair appeared to be slightly the longest, and those of the third pair slightly the shortest, while those of the first and second pairs were almost, if not quite, equal. The colour of the legs is pale yellow, conspicuously blotched and banded with black; they are furnished with hairs, bristles, and long slender spines; and each tarsus ends with three curved black claws.

*Palpi* short, similar in colour and armature to the legs, and terminating with a curved black claw.

*Falces* rather small, but strongish, vertical and conical; their colour is yellow-brown, banded with a darker hue towards their extremities.

The *maxillæ* and *labium* are similar in colour to the cephalothorax, as also the *sternum*, which is heart-shaped, rather convex and glossy.

*Abdomen* large, convex above, broad and rounded in front, pointed behind, and projects greatly over the base of the cephalothorax; the texture of the cuticle is strong; it is of a metallic silvery nature on the upperside; the sides, as also the fore and undersides, are deep brown; the underside has a central somewhat cruciform silvery patch; the upperside is charged with a large elongate-triangular deep brown marking, which does not quite touch the brown fore side, its margins are irregularly notched or dentate, and its acute point terminates just above the spinners; this marking is mottled with minute silvery dots behind, and has an inverted T-shaped metallic silvery marking on its fore part; on either side of the brown triangular marking are a few small dark brownish elongate spots. The whole of the upperside of the abdomen is thinly covered with small

reddish-brown shining tubercles; some of those on the fore side have long curved pale spine-like bristles issuing from them; and probably similar ones had been rubbed off from the rest. Spinners short, and devoid of any specially distinguishing feature.

A single female of this curious Spider was received from Mr. Thwaites in the Ceylon collection before mentioned; it appears to belong to some hitherto uncharacterized genus, and to be of the family *Thomisides*. Although not quite adult, it had the appearance of being nearly full-grown; nothing is known of its habits.

#### Family MYRMECIDES.

Nov. gen. APHANTOCHILUS (α priv. φαίνω, to appear, and χείλος, the lip).

*Characters of the Genus.*—*Cephalothorax* long, broader in front than behind, divided into quasi-segments by strong constrictions, and armed with some longish pointed corneous projections; clypeus large, somewhat quadrate, and prominent.

*Abdomen* short, broad, oval, united to the cephalothorax by a cylindrical pedicle.

*Eyes* eight, small and unequal in size, situated in two quadrangular groups of four each; the groups widely separated from each other on the highest part of the caput.

*Legs* moderately long and strong; relative length 4, 1, 2, 3, those of the first three pairs being very nearly, if not quite, equal in length; each tarsus ends with two curved pectinated claws.

*Maxillæ* long, straight, and strong, very wide at their bases, the inner edges of which are contiguous, as also are their inner edges near their extremities; these are a little enlarged and rounded on their *outer*, and obliquely truncated on their *inner* sides.

*Labium* obsolete.

*Sternum* apparently duplicate; the fore one narrow, somewhat oblong-oval, deeply emarginate or indented on the edges opposite to the legs of the first three pairs, and terminating in a point between those of the third pair; between this point and the coxæ of the legs of the fourth pair (which are in contact with each other) is a very small second or rudimentary sternal plate, round, and quite separate from the fore one.

APHANTOCHILUS ROGERSII, n. sp. (Plate XLIV. fig. 10.)

Female adult, length 5 lines.

The cephalothorax is more than double as long as it is broad, and strongly constricted in two places—behind the caput, and between the third and fourth pairs of legs; the caput is a little higher than the rest of the cephalothorax, and forms a sort of elevated transverse ridge, on the extremities of the highest part of which the eyes are placed; these extremities are prolonged in a lateral direction on either side into a longish strong horn-like process pointed at its extremity, slightly curved and directed forwards; the centre of the thorax is



also elevated into a similar horn, straight, sharp-pointed, and inclining backwards; the surface of the cephalothorax is black; it reflects green and golden tints in a strong light, and is uniformly granular over the thorax; the caput is strongly and thickly punctured, and has a bright red-brown hue between the eyes; the *clypeus*, which is of remarkable size, and wider than the upper part of the caput, is about double as broad as it is long; it is rounded on the *lateral*, and hollow on the fore margin; the latter projects considerably over the base of the *falces*, and is armed along its edge with a row of small spines.

The *eyes* may be described either as in two widely separated groups of four each, or in two nearly concentric long curved rows, the curve directed forwards, and the hinder row the longest. The external eyes of each row are larger than the centrals, and the space between each of the centrals of either row is equal; these four eyes thus form a transverse parallelogram, whose length is more than double its breadth; the two hind central eyes are the smallest of the eight; the two laterals on either side spring (one before and the other behind) from the base of the two horns above mentioned.

*Legs* black, furnished with a very few small spines, fine bristles, and hairs; those of the first three pairs seemed to have little or no difference in their relative length, those of the fourth pair being considerably the longest; each femoral joint is prolonged on its upperside into a strong bluntish spur; a somewhat bent and long narrow cream-yellow stripe is conspicuous on the uppersides of the metatarsi of the first two pairs of legs, and a smaller one on those of the third pair. The tarsi as well as the fore extremity (on the underside) of the metatarsi are thickly furnished with hairs; and beneath the two terminal claws is a scopula, or brush of close-set hairs.

*Palpi* short, strong, and tapering; they are similar to the legs in colour; the radial and digital joints are closely united and look almost like one joint, the latter are thickly furnished on their undersides with short papillæform hairs. No terminal claw was visible; but possibly a very minute one may be concealed by the hairs with which the extremity is furnished.

*Falces* short, strong, conical, and nearly vertical; they are set back beneath the prominent lower margin of the clypeus; their colour is a brightish yellow, with the extremities dark red-brown; and their upper surface is furnished with spiny bristles.

The *maxillæ*, *sternum*, and connecting pedicle between the abdomen and cephalothorax are black.

The *abdomen* is short, broad-oval or roundish, and a little pointed behind, moderately convex above, somewhat rugulose, longitudinally on the sides, and transversely below; it is sparingly clothed with short hairs and a few pale bristles, and is of a dull greyish olive-green hue, broadly darker along the median line of the upperside; on either side of this, and not very far from the centre of the abdomen, is a not very conspicuous circular impressed eye-like marking of a deep brown colour. The spiracular plates form one large deep-black-brown shining coriaceous area enclosing the epigyne, the aperture of